

CLAIMS

1. A mutant APC protein comprising the function of inducing piling up of cells.

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2. The mutant APC protein of claim 1, wherein at least any one of the amino acid regions of (a) to (c) is deleted:

(a) C-terminal amino acid region starting from amino acid position 2827 in the APC protein of SEQ ID NO: 1;

10 (b) C-terminal amino acid region starting from amino acid position 2159 in the APC protein of SEQ ID NO: 1; and

(c) C-terminal amino acid region starting from amino acid position 860 in the APC protein of SEQ ID NO: 1.

15 3. The mutant APC protein of claim 1 or 2, wherein the protein is derived from *Xenopus laevis*.

4. A mutant APC protein which can induce piling up of cells, wherein said protein comprises the amino acid sequence of a mutant APC protein
20 of any one of claims 1 to 3, in which one or more amino acids are substituted, deleted, added, and/or inserted.

5. A polynucleotide that encodes a mutant APC protein of any one of claims 1 to 4.

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6. A vector that comprises the polynucleotide of claim 5.

7. A cell that comprises an artificially expressed mutant APC protein of any one of claims 1 to 4, or the vector of claim 6.

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8. The cell of claim 7, which is derived from a mammal.

9. The cell of claim 7, which is derived from *Xenopus laevis*.

35 10. A cell of any one of claims 7 to 9, which is an established cell line.

11. A method of screening for a candidate compound that inhibits piling up of cells, wherein the method comprises the steps of:

- (a) contacting a cell of any one of claims 7 to 9 with a test compound;
- 5 (b) detecting piling up of said cells; and
- (c) selecting compounds that inhibit the piling up of cells.

12. A method of screening for a polynucleotide that encodes a mutant APC protein which can induce piling up of cells, wherein the method
10 comprises the steps of:

- (a) introducing *Xenopus laevis*-derived cells with a test polynucleotide to express a mutant APC protein;
- (b) culturing said cells;
- (c) detecting piling up of said cells; and
- 15 (d) selecting polynucleotides that pile up said cells.